

IN THE CLAIMS:

1. (previously presented) A method for negotiation or re-negotiation of at least one parameter for use in the operation of a protocol that controls data transmission between first communication units and third communication units via second communication units,

where said protocol is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of said parameter,

said method comprising: wherein when an existing association of a first communication unit with a former second communication unit that was associated with a third communication unit of said first type is changed to an association of said first communication unit with a new second communication unit that is associated with a third communication unit of said second type,

said protocol entities of said first communication unit and protocol entities of said third communication unit of said second type exchange at least one negotiation message containing a value for said parameter, and starting said exchange of said at least one negotiation message by transmitting, from a protocol entity of said first communication unit, a negotiation message containing a value for said parameter to a protocol entity of said third communication unit of said second type.

2. (previously presented) A method according to claim 1,

wherein in said exchange of said negotiation message, said protocol entity in said first communication unit performs the following:

a first checking whether said parameter is required for the operation of said protocol between said protocol entities of said first communication unit and said third communication unit of said second type, and

a second checking whether said parameter needs to be negotiated or re-negotiated,

wherein said transmitting, from said protocol entity of said first communication unit, said negotiation message containing a value for said parameter to said protocol entity of said third communication unit of said second type is only performed if said first and second checking produced positive results.

3. (canceled)

4. (previously presented) A method according to claim 2,

wherein in said exchange of said negotiation message, said protocol entity of said third communication unit of said second type performs the following:

receiving said negotiation message transmitted by said protocol entity of said first communication unit containing a value for said parameter, and

transmitting a negotiation message to said protocol entity of said first communication unit containing said received value or a higher value for said parameter.

5. (previously presented) A method according to claim 1,

wherein said first communication unit is a mobile station of a mobile radio system,

wherein said second communication units are base transceiver stations, and

wherein said third communication units are mobile-services switching centres.

6. (previously presented) A method according to claim 5,

wherein said third communication unit of said first type is a mobile-services switching centre of a mobile network operated according to the universal mobile telecommunications system standard or a derivative thereof, and

wherein said third communication unit of said second type is a mobile-services switching centre of a mobile network operated according to the global system for mobile communications standard or a derivative thereof.

7. (previously presented) A method according to claim 5,

wherein said protocol is a circuit switched, non-transparent single- and/or multi-link data protocol with an automatic repeat request.

8. (previously presented) A method according to claim 7,
wherein said protocol is a radio link protocol.
9. (previously presented) A method according to claim 7,
wherein said parameter defines a value of a re-sequencing timer that guards a
difference between delays of frames transmitted on different physical links within a multi-link
protocol.
10. (previously presented) A method according to claim 2,
wherein said protocol is a circuit switched, non-transparent single- and/or multi-link
data protocol with automatic repeat request, and
wherein said first checking whether said parameter is required for the operation of said
protocol between said protocol entities of said first communication unit and said third
communication unit of said second type comprises checking whether said data transmission
between said first communication unit and said third communication unit of said second type
is a multi-link transmission or whether there is a possibility that a single-link transmission
will be upgraded to a multi-link transmission later.
11. (previously presented) A method according to claim 10,
wherein said second checking whether said parameter needs to be negotiated or re-
negotiated comprises checking whether a value for said re-sequencing timer was defined by a
user of said mobile station.
12. A method for negotiation or re-negotiation of at least one parameter for use in the
operation of a protocol that controls data transmission between first communication units and
third communication units via second communication units, where said protocol is
operated by protocol entities in said first and third communication units, where a first
communication unit is always associated with a second communication unit at a time,
where a second communication unit is always associated with a third communication
unit at a time, and

where there exist second communication units of at least a first and second type that require different choices of said parameter,

said method comprising:

wherein when an existing association of said first communication unit with a former second communication unit of said first type is changed to an association of said first communication unit with a new second communication unit of said second type, said protocol entities of said first communication unit and protocol entities of said third communication unit associated with said new second communication unit exchange at least one negotiation message containing a value for said parameter,

transmitting, in said exchange of said negotiation message, a negotiation message containing a value for said parameter from said protocol entity of said third communication unit associated with said new second communication unit to said protocol entity of said first communication unit

wherein said value for said parameter depends on a transmission characteristic of a transmission medium between said new second communication unit and its associated third communication unit and

wherein said value can be determined by said third communication unit for each of the second communication units it can be associated with.

13. (canceled)

14. (canceled)

15. (previously presented) A method according to claim 12,

wherein said exchange of said negotiation message, said protocol entity of said first communication unit performs the following:

receiving said negotiation message transmitted by said protocol entity of said third communication unit that is associated with said new second communication unit and containing a value for said parameter, and

transmitting a negotiation message to said protocol entity of said third communication unit that is associated with said new second communication unit containing the same or a higher value for said parameter.

16. (previously presented) A method according to claim 12,

wherein said first communication unit is a mobile station of a mobile radio system,
wherein said second communication units are base transceiver stations, and
wherein said third communication units are mobile-services switching centres.

17. (previously presented) A method according to claim 16,

wherein one out of said first and second types of said second communication unit is a base transceiver station that is connected to its associated mobile-services switching centre via a lower-delay network, and

wherein the other type of said second communication unit is a base transceiver station that is connected to its associated mobile-services switching centre via a higher-delay network.

18. (previously presented) A method according to claim 17,

wherein said lower-delay network is a time division multiplex network.

19. (previously presented) A method according to claim 17,

wherein said higher-delay network is at least partially based on the internet protocol or a satellite connection.

20. (previously presented) A method according to claim 17,

wherein said mobile-services switching centre that is connected to its associated base transceiver station via a lower-delay network is either operated according to the universal mobile telecommunications system standard, the global system for mobile communications standard or a derivative thereof, and

wherein said mobile-serves switching centre that is connected to its associated base transceiver via a higher-delay network is either operated according to the universal mobile

telecommunications system standard, the global system for mobile communications standard or a derivative thereof.

21. (previously presented) A method according to claim 12,
wherein said protocol is a circuit switched, non-transparent single- and/or multi-link data protocol with automatic repeat request.

22. (previously presented) A method according to claim 21,
wherein said protocol is a radio link protocol.

23. (previously presented) A method according to claim 21,
wherein said parameter defines a value of an acknowledgement timer that guards a re-transmission period after which a re-transmission of a not-acknowledged frame within a protocol with Automatic repeat request may be started.

24. (previously presented) A method according to claim 21,
wherein said parameter defines a value of a re-sequencing timer that guards a difference between delays of frames transmitted on different physical links within a multi-link protocol.

25. (previously presented) A method according to claim 12,
wherein said transmission characteristic is related to a transmission delay.

26. (previously presented) A method for negotiation of at least one parameter for use in the operation of a protocol that controls data transmission between first communication units and third communication units via second communication units,
where said protocol is operated by protocol entities in said first and third communication units,
where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of said parameter,

said method comprising:

wherein in case that it is possible that an association of said first communication unit with a second communication unit that is associated with a third communication unit of said first type may be changed to an association of said first communication unit with a second communication unit that is associated with a third communication unit of said second type, and

said protocol entities of said first communication unit and said protocol entities of said third communication unit of said first type perform the step of exchanging at least one negotiation message containing a value for said parameter prior to said change of associations.

27. (previously presented) A method according to claim 26,

wherein in said exchanging said negotiation message, said protocol entities in said first communication unit or said third communication unit of said first type perform the following:

checking whether it is possible that said data transmission between said first communication unit and said third communication unit of said second type is a multi-link data transmission that requires a definition of a re-sequencing timer as said parameter for said protocol, and

checking whether a value for said re-sequencing timer is available as a basis for negotiation.

28. (currently amended) A computer readable memory in which a computer program product is loaded, the computer program product comprising software code portions ~~directly loadable into a computer readable memory~~, said software code portions when run on a computer for performing the actions of claim 1.

29. (previously presented) A system comprising first communication units, second communication units and third communication units, wherein the system is for data transmission between said first communication units of said system and said third communication units of said system via said second communication units of said system, where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units, where a first communication unit is always associated with a second communication unit at a time, where a second communication unit is always associated with a third communication unit at a time, and where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol, wherein when an existing association of said first communication unit with a former second communication unit that was associated with a third communication unit of said first type is changed to an association of said first communication unit with a new second communication unit, said protocol entities of said first communication unit and protocol entities of said third communication unit of said second type exchange at least one negotiation message containing a value for said parameter, wherein said exchange of said at least one negotiation message is started by said first communication unit by transmitting, from a protocol entity of said first communication unit, a negotiation message containing a value for said parameter to a protocol entity of said third communication unit of said second type.

30. (previously presented) A system comprising first communication units, second communication units and third communication units, wherein the system is for data transmission between said first communication units of said system and said third communication units of said system via said second communication units of said system, where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol,

wherein in case that it is possible that an association of a first communication unit with a second communication unit that is associated with a third communication unit of said first type may be changed to an association of said first communication unit with a second communication unit that is associated with a third communication unit of said second type,

said protocol entities of said first communication unit and said protocol entities of said third communication unit of said first type perform the step of exchanging at least one negotiation message containing a value for said parameter prior to said change of associations.

31. (currently amended) A first communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol,

said first communication unit comprising:

a processor arranged for starting, in case an existing association of said first communication unit with a former second communication unit ~~that was associated with a third communication unit~~ of said first type is changed to an association of said first communication unit with a new second communication unit that is associated with a third communication unit

of said second type, ~~an initiative for~~ an exchange of at least one negotiation message containing a value for said parameter between protocol entities of said first communication unit and protocol entities of said a third communication unit of said second type by transmitting, from a protocol entity of said first communication unit, a negotiation message containing a value for said parameter to a protocol entity of said third communication unit of said second type.

32. (previously presented) A third communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time,

where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol,

wherein said third communication unit is a third communication unit of said second type and comprises:

a processor arranged for exchanging, in case an existing association of a first communication unit with a former second communication unit that was associated with a third communication unit of said first type is changed to an association of said first communication unit with a new second communication unit that is associated with said third communication unit of said second type, at least one negotiation message containing a value for said parameter between protocol entities of said first communication unit and protocol entities of said third communication unit of said second type, wherein said exchange of said at least one negotiation message is started by said first communication unit by transmitting, from a protocol entity of said first communication unit, a negotiation message containing a value for said parameter to a protocol entity of said third communication unit of said second type.

33. (previously presented) A system comprising first communication units, second communication units and third communication units, wherein the system is for data transmission between said first communication units of said system and said third communication units of said system via said second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist second communication units of at least a first and second type that require different choices of said parameter,

wherein when an existing association of a first communication unit with a former second communication unit of said first type is changed to an association of said first communication unit with a new second communication unit of said second type, said protocol entities of said first communication unit and protocol entities of a third communication unit associated with said new second communication unit exchange at least one negotiation message containing a value for said parameter,

wherein in said exchange of said negotiation message, said protocol entity of said third communication unit associated with said new second communication unit performs the step of transmitting a negotiation message containing a value for said parameter to said protocol entity of said first communication unit,

wherein said value for said parameter depends on a transmission characteristic of a transmission medium between said new second communication unit and its associated third communication unit and that said value can be determined by said third communication unit for each for the second communication units it can be associated with.

34. (previously presented) A first communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist second communication units of at least a first and second type that require different choices of said parameter,

said first communication unit comprising:

a processor arranged for exchanging, in case that an existing association of said first communication unit with a former second communication unit of said first type is changed to an association of said first communication unit with a new second communication unit of said second type, at least one negotiation message containing a value for said parameter between protocol entities of said first communication unit and protocol entities of a third communication unit associated with said new second communication unit,

wherein in said exchange of said negotiation message, said protocol entity of said third communication unit associated with said new second communication unit performs the step of transmitting a negotiation message containing a value for said parameter to said protocol entity of said first communication unit, and

wherein said value for said parameter depends on a transmission characteristic of a transmission medium between said new second communication unit and its associated third communication unit and that said value can be determined by said third communication unit for each for the second communication units it can be associated with.

35. (previously presented) A third communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist second communication units of at least a first and second type that require different choices of said parameter,

said third communication unit comprising:

a processor arranged for exchanging, in case an existing association of a first communication unit with a former second communication unit of said first type is changed to an association of said first communication unit with a new second communication unit of said second type that is associated with said third communication unit, at least one negotiation message containing a value for said parameter between protocol entities of said first communication unit and protocol entities of said third communication unit,

wherein in said exchange of said negotiation message, said protocol entity of said third communication unit associated with said new second communication unit performs the step of transmitting a negotiation message containing a value for said parameter to said protocol entity of said first communication unit, wherein said value for said parameter depends on a transmission characteristic of a transmission medium between said new second communication unit and its associated third communication unit and that said value can be determined by said third communication unit for each for the second communication units it can be associated with.

36. (previously presented) A first communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol,

said first communication unit comprising:

a processor arranged for exchanging, in case that it is possible that an association of said first communication unit with a second communication unit that is associated with a third communication unit of said first type may be changed to an association of said first communication unit with a second communication unit that is associated with a third communication unit of said second type, at least one negotiation message, which contains a value for said parameter, between said protocol entities of said first communication unit and said protocol entities of said third communication unit prior to said change of associations.

37. (previously presented) A third communication unit in a system for data transmission between first communication units of said system and third communication units of said system via second communication units of said system,

where a protocol that controls said data transmission is operated by protocol entities in said first and third communication units,

where a first communication unit is always associated with a second communication unit at a time,

where a second communication unit is always associated with a third communication unit at a time, and

where there exist third communication units of at least a first and second type that require different choices of at least one parameter for use in the operation of said protocol,

wherein said third communication unit is a third communication unit of said first type and comprises:

a processor arranged for exchanging, in case that it is possible that an association of a first communication unit with a second communication unit that is associated with said third communication unit may be changed to an association of said first communication unit with a second communication unit that is associated with a third communication unit of said second type, at least one negotiation message, which contains a value for said parameter, between said protocol entities of said first communication unit and said protocol entities of said third communication unit prior to said change of associations.

38. (new) A computer readable memory in which a computer program product is loaded, the computer program product comprising software code portions, said software code portions when run on a computer for performing the actions of claim 12.

39. (new) A computer readable memory in which a computer program product is loaded, the computer program product comprising software code portions, said software code portions when run on a computer for performing the actions of claim 26.